

IN THE SPECIFICATION:

Please replace the paragraph beginning at page 3, line 7, as follows:

Further, FIG. 1 is a front view illustrating an inner surface, i.e., a surface at which a flame is discharged, of the burner 130 opposite to a quartz tube. The burner 130 has burner bodies 134 between burner covers 132 with hydrogen and oxygen dischargers 136 and 138 arranged between the burner bodies 134. The hydrogen and oxygen dischargers 136 and 138 are continuously provided with hydrogen and oxygen gas, so as to heat the surface of the second quartz tube. The hydrogen discharger 136 signifies an inside of each tip 139, while the oxygen discharger 138 signifies an outside of the tip 139. In addition, hydrogen and oxygen mass flow controllers (MFC) 140 and 142 are included, respectively, in the burner 130, for controlling a mass flow of the hydrogen and oxygen gas.

Please replace the paragraph beginning at page 8, line 8 as follows:

An over-cladding apparatus for performing an over-cladding process according to a preferred embodiment of the present invention will be described herein below with reference to FIG. 2. Some arrangements are installed to be vertically separated from each other around the axis of a tower 20. Upper and lower fixing chucks 212 and 222, **respectively**, are included in the over-cladding apparatus to fix a first quartz tube as a first pre-form 216 and a second pre-form 226 comprising the collapsed second quartz

tube 226 onto the first pre-form 216 after heating. 222 The upper and lower fixing chucks fix the pre-forms around the axis at the upper and lower sides of the tower 20.

Please replace the paragraph beginning at page 8, line 15 with the following:

First, the first pre-form 216 having a handle rod 214 is installed by fixing the handle rod 214 to the upper chuck 212. A second quartz tube 226 having a supplementary support quartz tube 224 is installed by fixing the supplementary support quartz tube 224 at a first end to the lower fixing chuck 222. **The supplementary support quartz tube 224 is fixed at a second end to the first pre-form 216.** During the process, it does not matter that an installation order of the first pre-form 216 and the second quartz tube 226 is reversed.

Please replace the paragraph beginning on page 9, line 9, with the following:

Here, the larger a thickness or a scale of the over-cladding quartz tube 226 is, the higher is the required heat capacity of the burners. If heat is applied to an outer surface of the quartz tube 226, in order to perform an over-cladding on the first pre-form 216 with the second quartz tube 226, the heat is conducted to the quartz tube 226, converging on a predetermined region therein, whereby the hottest region, namely a hot zone, is formed in the predetermined region of the quartz tube. The heat is conducted from the hot zone to an inside of the second quartz tube 226, which is condensed and melted ~~into~~ **onto** the first pre-form 216 to produce a second pre-form (not shown). Thus, if the

second quartz tube 226 to be a subject of the over-cladding is thick, the burner should have a size in conformity of a periphery of the second quartz tube 226, so as to achieve an efficient heat transfer to the inside thereof. In addition to this, a provision of a fuel such as hydrogen and oxygen gas is preferably increased to enhance the heat capacity of the burners. In this case, a vacuum pump 250 is preferably used to improve inhalation of air, serving to enhance the heat transfer efficiency.

Please replace the paragraph beginning at page 10, line 8 with the following:

More specifically, according this embodiment of the present invention, the high efficiency burner for over-cladding comprises: burner bodies 232 arranged between the upper and lower burner covers 231, respectively; tip lines 255 featured arranged in at least two rows between the burner bodies 232; and a partition 235 positioned between the tip lines 255. The hydrogen discharger 233 signifies an inside of each tip, while the oxygen discharger 234 signifies a periphery of the tip. Here, the tip lines may have hydrogen flow controllers 240 and 241 and oxygen flow controllers 242 and 243 on an independent basis. Further, the mass flow controllers are independently installed.